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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,631	11/21/2003	Satoshi Ueda	SON-2850	9147
23353 7590 09/28/2007 RADER FISHMAN & GRAUER PLLC LION BUILDING 1233 20TH STREET N.W., SUITE 501 WASHINGTON, DC 20036			EXAMINER SINKANTARAKORN, PAWARIS	
			ART UNIT 2616	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/717,631

Applicant(s)

UEDA ET AL.

Examiner

Pao Sinkantarakorn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 12 is/are rejected.
- 7) ☒ Claim(s) 9, 11, and 13-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. Claims 1-9 and 11-14 are pending. Claim 10 is cancelled. Claims 11-14 are newly added.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3, 6, 7, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Hurvig et al. (US 6,507,592).

Regarding claims 1, 6, and 10, Hurvig et al. disclose a communication apparatus (see column 3 lines 65-67) having a network device connected to a network to be used for outputting and receiving packets to and from the network (see column 3 lines 65-67, two-way communication), the communication apparatus comprising:

time measurement means for measuring a time on the basis of a clock signal (see column 6 lines 60-67, the clock generator means measures and generates a clock signal) having a predetermined frequency (see column 7 lines 19-26, the clock generator means generates a clock frequency of 10, 66, or 100 MHz);

transmission process means for receiving information data from an application at a higher level, packetizing the information data (see column 5 lines 60-67, the processor

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generates at the processor level and insert the output time stamp value into each outgoing data packet and subsequently transfer the time-stamped outgoing data packet to the interface unit memory area), outputting the packet to the network by way of the network device and saving sender information including a transmission time of the packet (see column 5 lines 63-64, the time-stamped outgoing packet is transferred to the interface unit memory area waiting to be outputted based on the time stamp value);

reception process means for receiving a predetermined packet from the network by way of the network device (see column 6 lines 31-33, an MPEG stream is received via the input buffer means), generating receiver information including an arrival time of the packet by using the time measurement means (see column 6 lines 44-47 and column 12 lines 26-30, the incoming packets are provided with respective time stamp values by the sampling circuit), saving the receiver information (see column 5 lines 28-30, the input buffer means may store time-stamped incoming data packets before they are transferred to the interface unit memory), depacketizing the packet to obtain predetermined information data (see column 12 lines 47-56) and outputting the predetermined information data to an application at a higher level (see column 12 lines 37-40, program running on the CPU fetches the stored frames in the frame memory area); and

data control means for controlling flows of the information data (see column 12 lines 37-46, the data frame management fetches the incoming packets stored in the frame memory area and also handles the generation of outgoing data packets).

Regarding claim 3, Hurvig et al. disclose a communication apparatus, wherein the reception process means includes:

storage means for storing time information showing a point of time measured by the time measurement means as a packet arrival time for each reception of a packet (see column 12 lines 26-28); and

reception-state examination means for examining a state at a reception time by the time information, which is generated continuously (see column 12 lines 47-56, the data packet management detects a MAC frame which contain a specific time indicator for upstream synchronization of slots).

Regarding claim 7, Hurvig et al. disclose a transmission apparatus having a network device connected to a network to be used for outputting a packet to the network, the transmission apparatus comprising:

payload storage means for temporarily storing information data received from an application at a higher level as a payload of the packet (see column 5 lines 60-67, the processor generates and inserts the output timestamp value into each outgoing data packet and transfer the timestamped outgoing packet to the interface unit memory area);

determination means for determining whether or not the information data received from the application at a higher level includes predetermined attached information to be attached to the packet (see column 5 lines 28-42, the output buffer means have a number of device registers, which are capable of reading the parameters of the data reception and transmission processes, e.g., the number of bytes of an

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incoming or outgoing data packets which is stored at a time in the input and output buffer means, so that it can control the parameters of the data reception and transmission processes)

attached-information storage means for extracting the attached information from the information data received from the application at a higher level and temporarily keeping the attached information (see column 5 lines 60-67, the processor generates and inserts the output timestamp value into each outgoing data packet and transfer the timestamped outgoing packet to the interface unit memory area);

control means for allocating an area in the payload storage means as an area to be used for storing the attached information (see column 5 lines 20-24 and 29-37, the input buffer means and the output buffer means have a number of registers which may control specific parameters, e.g. the number of bytes of an incoming data packets which is stored at a time in the input buffer means or the output buffer means); and

attached-information write means for writing the attached information kept temporarily in the attached-information storage means into the area allocated by the control means as an area to be used for storing the attached information (see column 5 lines 29-42).

Claim Rejections - 35 USC § 103

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 4, 5, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hurvig et al. in view of Ngo (US 6,510,150).

Regarding claim 2, Hurvig et al. disclose all the subject matter of the claimed invention except a communication apparatus, wherein the communication apparatus further comprising a management-packet process means for: transmitting the management-information packet to the network by way of the network device; and acquiring the management-information packet generated by another communication apparatus.

The invention of Ngo from the same or similar fields of endeavor discloses a means for generating and distributing timestamp values among all transceivers in the network (see column 4 lines 50-55).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a means for generating and distributing timestamp values among all transceivers in the network as taught by Ngo into the communication apparatus of Hurvig et al.

The motivation for implementing a means for generating and distributing timestamp values among all transceivers in the network is that it increases efficiency of all the devices in the network.

Regarding claim 4, Hurvig et al. disclose a communication apparatus, wherein the reception process means includes correction means for correcting the time measurement means so as to control the time measurement means of a transmitting communication apparatus on the basis of the transmission time information (see column 7 lines 55-59).

However, Hurvig et al. do not disclose a means for comparing transmission time information included in a received packet as a transmission point of time measured for the packet by the time measurement means of the transmitting communication apparatus with time information showing a point of time measured as an arrival time of the packet by the time measurement means.

The invention of Ngo from the same or similar fields of endeavor discloses a means for comparing the received timestamp value and the local time stamp value and calculate the offset based on the comparison (see column 7 see lines 5-14).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a means for comparing the received timestamp value and the local time stamp value and calculate the offset based on the comparison as taught by Ngo into the communication apparatus of Hurvig et al.

The motivation for implementing a means for comparing the received timestamp value and the local time stamp value and calculate the offset based on the comparison is that it increases efficiency of the communication apparatus.

Regarding claim 5, Hurvig et al. disclose a communication apparatus, wherein the reception process means includes: storage means for storing transmission-time information, which is included in a first packet received after initialization, as a transmission point of time measured for the packet by the time measurement means of the transmitting communication apparatus (see column 12 lines 26-28); time-measurement start means for driving the time measurement means to start a measurement of time upon reception of the packet (see column 12 lines 22-25, a free-running counter is clocked by a clock signal provides a current timestamp value upon reception of each incoming packet);

However, Hurvig et al. do not disclose a communication apparatus, wherein the reception process means includes: addition means for adding data of time information generated by the time measurement means as a result of the measurement to data of

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the transmission-time information stored in the storage means; and time information generation means for generating time information synchronized with time information generated by the time measurement means of the transmitting communication apparatus.

The invention of Ngo from the same or similar fields of endeavor discloses a means for: adding an offset value to the current timestamp value stored in the timestamp counter and timestamp register (see column 7 lines 5-14); and generating a new timestamp value synchronized with the received timestamp value transmitted by another communication apparatus (see column 7 lines 5-16, the process repeats until the WT gets in sync with the BS).

Thus, it would have been obvious to the person of ordinary skill in the art to implement a means for: adding an offset value to the current timestamp value stored in the timestamp counter and timestamp register; and generating a new timestamp value synchronized with the received timestamp value transmitted by another communication apparatus as taught by Ngo into the communication apparatus of Hurvig et al.

The motivation for implementing a means for: adding an offset value to the current timestamp value stored in the timestamp counter and timestamp register; and generating a new timestamp value synchronized with the received timestamp value transmitted by another communication apparatus is that it increases efficiency of the communication apparatus.

Regarding claim 12, Hurvig et al. and Ngo disclose all the subject matter of the claimed invention except a communication apparatus, wherein the management-

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information packet is a Real-time Transport Control Protocol packet. However, the RTCP packet is well known in the art.

Thus, it would have been obvious to the person of ordinary skill in the art to implement a communication apparatus, wherein the management-information packet is a Real-time Transport Control Protocol packet into the communication apparatus of Hurvig et al. in view of Ngo.

The motivation for implementing a communication apparatus, wherein the management-information packet is a Real-time Transport Control Protocol packet is that it increases efficiency of all the devices in the network.

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hurvig et al. in view of Yin (US 5,926,458).

Regarding claim 8, Hurvig et al. disclose all the subject matter of the claimed invention except a communication apparatus, wherein the control means further has transmission control information write means for monitoring a result output by the determination means and a total amount of the information data stored in the payload storage means to determine whether or not a predetermined transmission condition is satisfied and writing information necessary for the transmission of the packet into the area allocated in the payload storage means as an area to be used for storing the transmission control information if the transmission condition is satisfied.

However, the invention of Yin from the same or similar fields of endeavor discloses a system comprising an outgoing buffer coupled to a packet scheduler,

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wherein the packet scheduler receives queue status information, which include information indicating whether a particular queue is full or empty, and the queue server allocates an area in the queue to be used for storing the data packet (see column 4 lines 41-64).

Thus, it would have been obvious to implement a system comprising an outgoing buffer coupled to a packet scheduler, wherein the packet scheduler receives queue status information, which include information indicating whether a particular queue is full or empty, and the queue server allocates an area in the queue to be used for storing the data packet as taught by Yin into the communication apparatus of Hurvig et al.

The motivation for implementing a system comprising an outgoing buffer coupled to a packet scheduler, wherein the packet scheduler receives queue status information, which include information indicating whether a particular queue is full or empty, and the queue server allocates an area in the queue to be used for storing the data packet is that it increases efficiency of the communication apparatus by preventing the overflow problem in a buffer.

Response to Arguments

9. Applicant's arguments filed July 9, 2007 have been fully considered but they are not persuasive.

On page 2 of the remarks, the applicants submit that Hurvig fails to teach or suggest "saving sender information [including a transmission time / showing conditions at a transmission time] of [a transmitted] packet." In reply, the examiner respectfully

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disagrees. Hurvig teaches transferring the timestamped outgoing packet to the interface unit memory area, which could be broadly interpreted as saving sender information.

Also, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., saving other information showing conditions at a transmission time) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

On page 2 of the remarks, the applicants submit that Hurvig fails to teach "determination means for determining whether or not the information data received from the application at a higher level includes predetermined attached information to be attached to the packet." In reply, the examiner respectfully disagrees. Hurvig teaches that the device registers control specific parameters of the data reception and transmission processes, wherein the parameters include starting or suspending the reception of incoming data packets, the number of bytes of an incoming data packets. In order to control the parameters, the device registers determine whether or not the data includes the specific parameters.

On page 3 of the remarks, the applicants submit that Hurvig fails to teach "control means for allocating an area in the payload storage means as an area to be used for storing the attached information if the determination means determines that the information data received from the application at a higher level includes the attached information." In reply, the examiner respectfully disagrees. Hurvig teaches that the input

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buffer means may store one or several complete and timestamped data packets and the device registers in the input buffer means are available for reading and writing by a data packet management program so that the parameters can be modified in software. There is nowhere in the claim that recites the space within the payload storage means is *selectively* allocated for this information.

On page 4 of the remarks, the applicants submit that, with regard to claim 2, the timestamp values are not management-information packets. In reply, the examiner respectfully disagrees. Timestamp values could be interpreted as management-information packets because timestamp values are used to synchronize the transmission and reception processes, which could be interpreted as management.

On page 5 of the remarks, the applicants submit that Ngo does not disclose a single apparatus, which perform both transmitting a timestamp and acquiring a timestamp as recited in claim 2. In reply, the examiner respectfully disagrees. Ngo discloses a one-step timestamp update method to distribute a timestamp value among all transceivers in the network (see column 4 lines 49-55). Transceivers are capable of both transmitting and acquiring signals.

On page 6 of the remarks, the applicants submit that Yin does not teach "transmission control information write means for monitoring a result output by the determination means and a total amount of the information data stored in the payload storage means to determine whether or not a predetermined transmission condition is satisfied." In reply, the examiner respectfully disagrees. Yin discloses the queue status information and queue service information, wherein queue service information include

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the number of queues and bandwidth allocation information for each queue, which could be broadly interpreted as the total amount of the information data stored in the payload storage means (see column 4 lines 41-64). Also, the applicants submit that Yin does not teach "writing information necessary for the transmission of the packet into the area allocated in the payload storage means as an area to be used for storing the transmission control information if the transmission condition is satisfied." In reply, the examiner respectfully disagrees. Yin discloses a method for allocating packets to queues according to the queue service information (see column 4 lines 52-64).

Allowable Subject Matter

10. Claims 9, 11, 13, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pao Sinkantarakorn whose telephone number is 571-270-1424. The examiner can normally be reached on Monday-Thursday 9:00am-3:00pm EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PS



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